Wisconsin
Department of Commerce

Approval # 990005-U (Replaces 930060-U)

Safety & Buildings Division
201 West Washington Avenue
P.O. Box 2689
Madison, WI 53701-2689

Wisconsin
Material Approval

Material: Simmons SIR 5.7 L.M. Statistical Inventory Reconciliation System

Manufacturer: The Simmons Corporation
106 East Main Street
Richardson, TX 75081

SCOPE OF EVALUATION

The Simmons SIR 5.7 L.M. Statistical Inventory Reconciliation System manufactured by the Simmons Corporation has been evaluated as a method of monthly monitoring for tanks and connected piping complying with **ss. ILHR 10.61 (8) and 10.615 (3)** of the current edition of the Wisconsin Administrative Flammable and Combustible Liquids Code.

DESCRIPTION AND USE

The SIR 5.7 System L.M. is a quantitative method that analyzes tank inventory records to detect leaks. The method estimates the leak rate and interprets the data as one of the following: tight, a leak indicated, results inconclusive, or results unusable.

Leaks from either the tank or piping will show as losses. If the system declares a leak, further testing may be necessary to identify the location of the leak.

Inventory data may be recorded manually, hand-entered into a computer, entered directly from an ATG, entered via a modem, entered remotely with a personal computer, or determined using the WILCO™ System. The WILCO System uses an electronic stick to transmit product and water level information to a receiver which is tied by a phone line to the Simmons Corporation.

The facility may be closed for one or more consecutive days during the week. This method is inadequate if there is an insufficient number of usable records or too much daily variability in the inventory records.

TESTS AND RESULTS

The performance of the Simmons SIR 5.7 L.M. System was determined in accordance with the EPA protocol for statistical inventory reconciliation methods. The system was found capable of detecting a 0.10 gallon per hour leak with a probability of detection of 99.0 percent and a probability of false alarm of 1.0 percent. The leak declaration threshold is a statistically significant product loss at the .01 level of significance.

LIMITATIONS OF APPROVAL

Data collection shall be accomplished in accordance with procedures specified by the manufacturer.

Tanks shall be evaluated each month.

The data records shall cover 26 days or more.

The tank shall be no larger than 45,000 gallons. This method may be used on manifolded systems of no more than 4 tanks. The sum total capacity of all tanks in the manifolded system shall be no greater than 45,000 gallons.

If the test results are inconclusive, unusable, or indicate a leak, the suspected release investigation and confirmation procedures under **ss. ILHR 10.63 and 10.64** shall be used.

If a second test is required to confirm the status of the tank system, that test shall be an approved tank tightness test in accordance with **s. ILHR 10.635 (2) (a)**. The SIR system may not be used as this tightness test.

The Simmons Corporation shall provide an updated list of all Wisconsin users of the System to the department every three months. Copies of any correspondence between the Simmons Corporation and their customers in Wisconsin shall be supplied by Simmons Corporation at the request of the department. Continued approval shall be contingent on department verification of operational viability of the Simmons SIR 5.7 L.M. System.

This approval will be valid through December 31, 2004, unless manufacturing modifications are made to the product or a re-examination is deemed necessary by the department. The Wisconsin Material Approval Number must be provided when plans that include this product are submitted for review.

DISCLAIMER

The department is in no way endorsing or advertising this product. This approval addresses only the specified applications for the product and does not waive any code requirement not specified in this document.

Reviewed by: _____

Approval Date: _____ By: _____

Duane Hubeler, P.E.
Mechanical Code Consultant
Program Development Bureau

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